STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
PRIVATE WELL PROGRAM

DROUGHT GUIDELINES FOR PRIVATE WELL USERS

Some private wells run dry every summer, while others, which may be right next-door, flow without a problem even during a drought. Geographical or physical conditions of the soil or rock and well construction may cause these differences.

Groundwater levels all across Connecticut may drop annually due to a lack of precipitation. This can happen anytime of the year but is more likely to be severest during greater water consumption periods, spring, summer and fall. Typically, dug wells are more likely to fail because of their shallow construction into water-laden overburden and are therefore less reliable than deeper drilled wells constructed into bedrock.

These guidelines have been prepared to help people cope with the situation.

Do I Have a Problem?

Maybe-

- If you hear the well pump in your basement (this implies your well is shallower than most drilled wells) going on more frequently than normal or;
- If you notice the pressure gauge on your storage tank fluctuating more often showing short cycling of your well's deep submersible well pump and pressure switch relay or;
- Experience water outages/surges or;
- If air bubbles come out of your non-aerated faucets or;
- You experience a sudden drop in water pressure or,
- The water suddenly becoming cloudy/turbid (heavily silted); your well may be having trouble keeping up with your demand for water.

Where is My Well?

Where is it? How deep is it? These are some basic questions. If you do not know the answers, call your local health department. If the well was constructed fairly recently (last 20 years) the local health department should have the completion report for your well on file. The well driller or well pump installer of your well may also have the information you need. Recently constructed wells should also be visible above grade for proper sanitary construction. Older wells were usually buried below grade (for aesthetics) in a concrete drainage tile with a circular cement cover slab. These slabs may or may not be visible.

As a simple start to your search go into the home's cellar of crawl space and see where the well

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line enters. A metal detector may be used in locating buried metallic well pipes. Newer drilled well discharge pipes are usually plastic (unless the wells are extremely deep) but the metal detector could still be useful if a tracer wire was laid with the discharge pipe or in detecting the well's steel casing or metallic sanitary seal.

Why Conserve Water?

You and your family can significantly reduce your daily water demand by: cutting back on outdoor water use by lessening lawn watering and car washing; limiting toilet flushing and laundry and; curtailing excessive bathing and showering times. Timing water use to spread out your water demand over the entire day can also help. Increasing your water tank storage volume by increasing the tank's size or number may also improve conditions.

Possible Options for Increasing Your Water Supply:

- Increase your home's stored water volume by increasing the size or number of your homes pressure water tanks or, installing a non-pressurized atmospheric tank with a transfer pump by a licensed plumber, could be the most cost effective way of solving your home's water demand crisis. The increased water storage would supply water for peak demand use without calling for well pump activation. This allows for groundwater to flow into the well (recover) for a longer period of time before the well pump is activated to replenish the stored water volume in the house.

- **I**f the well pump is in the well itself- as a standard practice new drilled bedrock wells have their submersible well pumps set about 10-15 feet above the bottom of the well. This setting should keep the pump up out of bottom sediments as the well ages over time. Perhaps the well's driller or pump installer may have the information to determine if this well pump lowering is feasible for your well. If the sedimentation is minimal the pump lowering can be accomplished. This procedure will result in more water being stored in the well's borehole (a typical 6 inch well casing holds one and one-half gallons of water per foot). You also may want to consider having a low water cutoff installed in your well's electrical wiring to prevent pump burnout if the water level in the well continues to drop.

- Hydro fracturing or high-speed velocity jetting, followed by thorough flushing of the well should improve the yield of the well and possibly increase well water column storage.

- Deepening your existing well is a last alternative (unless connecting to an approved Public Water System is an option). Consult with your local health authority on the advisability of this procedure and to obtain a listing of licensed well drillers in your area. This option along with hydro fracturing of any well requires a licensed well driller do the work.

Always seek the advice and services of only licensed well drillers and plumbers!

What About Well Water Contamination?

Anytime work is done on your well or you add additional water storage either by you, a well driller, a pump installer or a licensed plumber the well, storage tanks and the home's entire plumbing system should be disinfected. This disinfection, if properly done, will ensure that any bacteria that may have entered the system during the work procedure are destroyed.

A description of the procedure can be obtained from your local health authority and is also available at the State DPH Private Well Website at _____.

Regardless of circumstances, we recommend private well owners have their wells tested at least annually for coliform bacteria and any other indicators that may show contamination, and, whenever there is an obvious change in the water quality. Contact your local health authority for further advice.

One thing to remember, do not attempt to fill your empty well with water from outside sources. If the well has gone dry, it will not hold the water and the water will just disperse into the overburden and underlying aquifers.

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